

NAVY MEDICINE

May-June 2003



Operation Iraqi Freedom

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COVER: HMC Michael Roberts takes vital signs of a wounded Iraqi soldier after a firefight with the 1st Armored Reconnaissance Battalion outside the town of Numaniyah. War photos on page 18. Photo by GSGT Erik S. Hansen, USMC.

4-D Ultrasound

Putting a "New Face" on the Unknown

Parents viewing ultrasound pictures of their unborn children at National Naval Medical Center (NNMC) have entered, as "Twilight Zone" creator Rod Serling was fond of saying, another dimension.

A new 4-dimensional ultrasound machine, located in NNMC's Prenatal Assessment Care Unit, provides a truer image than previous ultrasounds.

Army LTC Christian Macedonia, maternal fetal specialist, is well acquainted with the 4-D and has raved about the efficient technology of this machine.

"For scanners like myself, working with this machine is like learning a new language," said Macedonia. "Real time research has been done on improving ultrasounds for 30 years," Macedonia pointed out. "Finally, over the last couple of years, computers have become advanced enough to handle this sort of data."

According to Macedonia, the new 4-D takes the same data that the old 2-dimensional ultrasound generated and produces a 3-dimensional, clear, lifelike image of the baby.

"The simplest way to explain how 4-D functions is to compare it with its predecessor, the 2-dimensional ultrasound. While the 2-D acts like a virtual knife, and takes 2-dimensional picture slices of the body, the 4-D takes those slices and puts them to-

gether to form a 3-dimensional loaf or whole image."

This "whole loaf" video image of the baby appears in real time, showing a true image of a baby as it moves and develops in the womb. The real time is the fourth dimension, hence the name "4-D."

Macedonia says he believes that the hospital couldn't have made a better decision when it bought the 4-D ultrasound machine.

"This purchase was done with patients in mind," said Macedonia. "It truly has a unique niche in medicine. This is a democratization of medicine that allows patients to see what the doctor sees. People can see characteristics of the baby's face and facial expressions because the clarity is sharp."

LCDR Carl Millward, anatomic pathologist, and wife Lisa have already spent some time with their daughter via 4-D.

"It was fantastic," said Millward. "We didn't know what to expect. The 4-D machine looks the same as the 2-D but it certainly is different. Getting to see her little face...it was an experience all in its own. This truly is a great resource for the Navy community."

The 4-D ultrasound is crucial for finding anomalies in babies. "Anomalies are easy to see on the 4-D," explained Macedonia. "It's important

for a parent to understand the level of complications their child will have. They have to begin researching and think about surgeries and maybe prolonged medical care once their child is born."

Macedonia pointed out that the machine is not perfect. "I tell my patients that the machine is like a child photographer," he explained. "A photographer can't produce an image if the child hides in the corner, and I can't produce an image if the baby tucks itself away in a wall of the uterus."

As far as the future, Macedonia is convinced that the 4-D is going to be part of something great.

"The machine has a lot of potential that we haven't tapped," said Macedonia. "For example, we want to establish a 'telemedicine network' in the future where we can provide a level of care regardless of where the patient is located."

The technology of the 4-D excites Macedonia, but the real thrill is getting to connect parents-to-be with their babies via 4-D.

"The fact that the family gets to be face-to-face with their baby is the magical part of my job. This is not a fad, but a unique American way of medicine that is here to stay." □

—Story by JO2(SW/AW) Sybil A. McCarrol, Public Affairs Office, NNMC, Bethesda, MD.

Navy Researchers Keep an Eye on Military Babies

About 90,000 babies are born to U.S. military families each year (39 percent Army, 25 percent Air Force, 24 percent Navy, and 11 percent Marine Corps). Military babies are born in all 50 states, the District of Columbia, and overseas. California, Texas, and Virginia report the highest number of military births, with more than 7,000 babies expected annually in each of these states. Nearly 10 percent of military births take place outside the United States. In 1999, military babies were born in 34 foreign countries; nearly 2,500 in Germany and just over 2,000 in Japan.

These statistics all come together as part of the DOD Birth and Infant Health Registry, established in 1998 at the Naval Health Research Center (NHRC), San Diego, CA. The DOD Center for Deployment Health Research at NHRC was given the responsibility of managing the Registry and providing systematic surveillance of DOD military births and calculations of birth defects prevalence.

CDR Margaret A. Ryan, MC, USN, Director of the DOD Center for Deployment Health Research, said, "Within the U.S. military, the overall prevalence of birth defects is approximately 3 percent, which is the same as the civilian population. That is very reassuring, but we have to keep looking harder at the data because every baby born on our watch is important."

Ryan pointed out that with the growing number of women on active duty and the diverse hazardous exposures associated with military service, reproductive health issues are a special concern for the military.

The DOD Birth and Infant Health Registry follows inpatient and outpatient visits for babies from birth through their first 12 months. The Registry was designed to be compatible with similar surveillance programs at the Centers for Disease Control and Prevention in Atlanta, and those maintained by separate states in the U.S. Ryan said, "It is notable that only 35 states have any kind of birth defects surveillance. This type of surveillance isn't easy to do. The military is uniquely positioned to do this well because we have a lot more data presented in a uniform way. We can do a very thorough job, epidemiologically, compared to our civilian peers. For example, the state registry in New York may not be perfectly comparable to the state registry in California, but we can compare data from every state in the union concerning military births."

Ryan went on to add that the Registry includes information supplied by multiple sources, such as military medical treatment facilities and clinics and civilian hospitals. At the military treatment facilities there are standard codes to report health care visits, whether that is at Naval Hospital

Okinawa or Naval Medical Center San Diego. Since 1997, in the Tricare system, where 60 percent of military babies are born at civilian facilities, the data are also reported in a standard form. The NHRC research team can determine the prevalence of birth defects in all major categories.

In addition, Ryan's team has access to demographic and service-related information about active duty members. It can determine deployment and occupational exposure histories that may be relevant to their birth defects surveillance and research efforts.

Reports generated from the Registry are publicly available. Each year, DOD provides non-confidential data from the Registry to the National Birth Defects Prevention Network (NBDPN). NBDPN tabulates composite data for the U.S. in an annual report; DOD has a separate listing in the report. The annual report is published in the peer-reviewed journal, *Teratology*. Ryan pointed out that access to the DOD Birth and Infant Health Registry annual reports from 1998 to 2000 will be available at the NHRC website (www.nhrc.navy.mil) early in 2003. □

—Story by Doris M. Ryan, Medical Research and Development Division (M26P), Bureau of Medicine and Surgery, Washington, DC.

Medical Logisticians Use JMAR as Their Tool of Choice

CDR David Stratton, MSC, USN
MAJ Mark Dick, MS, USA

Everyday, combat forces across the globe train, mobilize, and deploy in response to world events. These movements produce unique needs for information, asset visibility, and leveraged technology. Without question, the successful deployment of our operating forces relies upon countless factors including force health protection and readiness; mobile, tailored, and flexible deployment planning; and force sustainment. In turn, these factors depend heavily upon medical materiel to support the mission. The emergence of near-real-time medical materiel asset visibility serves a pivotal role in saving lives every step of the way. The Joint Medical Asset Repository (JMAR) keeps cadence with the daunting pace of force readiness by capturing, storing, and making medical asset data readily available in a central repository (<https://jmar.detrack.army.mil>). JMAR supports the missions of medical logisticians everywhere.

Medical logisticians' missions concentrate on locating the required medical commodities at the right time, getting them to the right place, all while utilizing various communication methods. Their tool of choice to help them get their job done? JMAR. JMAR is the single authoritative source to acquire, manage, and provide timely and accurate joint medical asset visibility information. JMAR is a data repository designed to capture, integrate, and store data in a central repository with web-based access. Originally conceived and designed by the U.S. Army Medical Materiel Agency (USAMMA) in 1996, JMAR acquires and provides a unique view of critical, Quad-service and commercial-level medical commodities. In December 2001, JMAR was fully integrated into the Defense Medical Logistics Standard Support (DMLSS) Program. JMAR serves as the component of the DMLSS Au-

tomated Information System (AIS) to support the military's joint medical logistics information management effort and Department of Defense (DOD) Military Health System (MHS). (For more information log on to DMLSS at: <http://tricare.osd.mil/dmlss>.)

JMAR strongly supports the Joint Vision 2010 tenets and its next generation Joint Vision 2020 (Signed by the Chairman of the Joint Chiefs of Staff.) For more information, log on at: www.dtic.mil/jv2020/. JMAR provides invaluable data for operations, planning medical logistics posture, and supply chain management for operational forces and hospitals in the MHS. The MHS leverages new technologies and information provided by JMAR to decrease costs, increase logistics velocity management, refine business processes, and support the warfighter.

Joint Vision 2020-Focused Logistics

There are precious commodities for our armed forces: beans, fuel, bullets, and bandages, and known in the supply class chain as Classes I, III, V, VIII. Whether it is a deployed Class VIII medical logistics supply operation, Naval Fleet Hospital, Air Force Expeditionary Medical System (EMEDS), or military hospital, focused logistics through Total Asset Visibility (TAV) of our medical commodity sustains our forces. How can we "see" all the beans, fuel, bullets, and bandages?

Enter Joint Total Asset Visibility (JTAV) (www.defenselink.mil/acq/jtav), a DOD program and application providing customers with timely and accurate information on the location, movement, status, identity of units, personnel, equipment, and supplies. Without appropriate vaccines, medicines, or functional medical equipment on hand, the lives, health, and safety of our

forces are at stake. JMAR sends data daily to the JTAV database, contributing to the “bandages” component of the JTAV equation and serving as the single authoritative source of medical asset data.

JMAR does not create new data. It captures and consolidates existing data from disparate legacy and replacement medical logistics sources. JMAR provides asset visibility along all points of the medical logistics pipeline, to include medical assets that are:

In-Storage—materiel at unit and retail consumer sites, at intermediate storage sites, at disposal activities, and within wholesale inventories, to include pre-positioned assets ashore and afloat and visibility of contractual and non-contractual assets stored at commercial sites.

In-Process—materiel on order from DOD vendors but not yet shipped; assets in repair at depot-level organic or commercial repair facilities, intermediate repair facilities, and unit level repair facilities. In-process also refers to blood or blood products that are not yet ready for use pending quality certification testing.

In-Transit—materiel within the transportation pipeline.

In-Theater—materiel located within a theater of operations.

Medical logistics assets can be in multiple places during their journey from manufacturer to theater. JMAR offers an extensive array of easily accessible reports designed to provide essential asset visibility and create Business Intelligence products on assemblages and facilities. Now, command level decision-makers, as well as item managers, medical commodity managers, and clinicians use JMAR to increase readiness and streamline acquisitions.

What Type of Data Does JMAR Capture?

JMAR is currently in Phase II, the Active Component (AC) phase of its development cycle. Scheduled for completion by the end of FY05, the goal of Phase II is to capture and integrate all relevant logistical data for all service-owned AC medical materiel and secondary items into JMAR. JMAR collects data on chemical defense materiel, vaccines, antibiotics prepositioned for wartime use, blood and blood products for military, prime vendor, medical surgical, and pharmaceutical data, and Vendor Managed and Corporate Exigency Contract Inventories. These data sources provide military medical materiel visibility, medical equipment information in medical assemblages and hospitals, and facility-management information.

The JMAR Web User Interface (WUI) offers assistance with pop-up, informative logistics definitions, real-time notices and “drill-down” reports. To further ease navigation, JMAR organizes data queries by data type such as: Inventory Management, Quality Assurance, Blood, Prime Vendor, and Equipment queries. Future integrations will include Facility Management, Medical Assemblages, Patient Movement Items (PMI), and, potentially, Federal Assets.

Medical Logistics is Big Business

JMAR’s vision also embraces the goal of reduced DOD investments in inventory, improved supply chain management, and business intelligence to capture and assist in managing the MHS expenditures, identifying over \$2.3 billion in annual purchases and over \$19 billion in costs associated with maintaining the MHS infrastructure. JMAR captures legacy data and produces business intelligence solutions to streamline and encourage refinement of business processes for decision support.

JMAR’s Business Intelligence

JMAR’s prime vendor report is an Initial Proof of Concept (IPOC) that summarizes expenditures using the prime vendor program and a combination of other sources when ordering medical commodities. In some cases, a majority of the orders at some facilities are placed with vendors *external* to the prime vendor supporting that facility. JMAR’s prime vendor reports find efficiencies and/or unplanned and increased expenditures for supplies available at contracted, fixed costs.

Information Superiority...JMAR’s Executive Dashboard Initiative

The JMAR team is ambitiously researching and designing for the future! Team JMAR continues to enhance real-time snapshots of medical asset data to be responsive to JTAV and medical logisticians worldwide. The DMLSS-JMAR leadership recently completed a review of responses to a Request for Proposal (RFP) submitted for an executive dashboard to use in Business Intelligence and Decision Support Initiatives. The RFP was submitted under the Small Business Innovation Research (SBIR) Fast Track (sponsored by DOD) which provides funding for research, development, and testing of DOD-specific or commercially usable products.

The Executive Dashboard will capture both internal and external metrics and important requirements in a user friendly Graphic User Interface (GUI) supporting the

multifaceted requirements of the MHS. Utilizing the SBIR program has allowed JMAR to pursue and utilize R&D funding from DOD programs while conserving and applying scarce resources for continued integration of over 55 development efforts. This type of innovative and collaborative initiative leverages the full spectrum of defense funding. In addition, using Business Intelligence tools provides trend-analysis and reveals areas for improvement. Through these targeted and powerful reporting capabilities, JMAR improves overall supply chain management.

JMAR Supports Operations Noble Eagle and Enduring Freedom

Immediately following the 11 September attacks on the World Trade Center and the Pentagon, JMAR processed requests for medical asset information. In support of Operation Noble Eagle, JMAR staff provided data on vaccines, burn dressings, IV solution bags, facemasks, eye care solution, and other medical necessities. This life-saving data was sent to the Emergency Operations Centers (EOC) for the Army, Air Force, and Navy.

JMAR provided medical logistics agencies with listings of materiel potentially needed to support mass casualties, future attacks, and force protection for our installations. With the support of JMAR, medical logisticians in the Army Operations Center (AOC) were able to utilize asset data to inform leadership about current on hand assets to support potential homeland defense and plan for future worldwide operations.

Information Assurance...JMAR Architecture and Security

By providing total asset visibility of medical materiel, JMAR will standardize logistics data and reduce the time that health care professional spend on logistics. The key features of the JMAR architecture include: (1) the integration of the asset databases, (2) real-time connectivity for updates of information, and (3) access to JMAR by any user, at any time, on any machine. The JMAR architecture provides joint medical assets in a data repository hosted in Oracle on an HP 9000/HPUX platform and supports queries initiated by JTAV programs and/or the Virtual DB mediator product.

Data from multiple DOD-level, service-level, and unit-level source databases populates the JMAR database. By using file transfers, JMAR obtains data from selected systems and loads data into the JMAR database. This makes the data available to JTAV and agency requests

through output feeds or the World Wide Web. This strategy provides data visibility to all users and meets the web-based standard of Defense Reform Initiative Directive (DRID) 54.

The JMAR Program Manager internally maintains access security. JMAR has the ability to limit data accessibility when deemed necessary. At the network level, firewall security is provided for communications into the JMAR server. A staging server isolates data being transferred into JMAR and checks data and files for viruses. Virtual Database Mediator provides its own security for JTAV access to the JMAR database server. User security for JMAR is maintained through individual user IDs and passwords. SSL encryption serves to protect passwords and data transmitted through the Web browser.

JMAR-Achieving Goals

Today, JMAR is a robust, web application housing the dynamic synergy of medical logistics asset information using leading-edge technology for medical logistics units, planners, hospitals, and deployed forces around the globe. JMAR provides precise information of medical assets during both wartime, as well as peacetime—meeting the DOD Joint Vision 2020 goals for focused medical logistics, information superiority, and full spectrum dominance! When mature, JMAR will be the central hub for Joint visibility of all medical materiel and equipment and will serve as the single, recognized, authoritative source for all Quad-Service medical materiel assets. JMAR achieves its mission everyday by providing global access to joint medical asset information for “*anyone, anytime, on any machine.*” □

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Navy Medicine Contributes to the War on Terrorism

LCDR Youssef H. Aboul-Enein, MSC, USN
André B. Sobocinski

On the Southern Philippine island of Basilan, under the ever-expansive umbrella of "Operation Enduring Freedom," the U.S. military is involved in a monumental construction project aimed at destroying the evils of terrorism in Southeast Asia. The completed edifice will be "four pillars" symbolically representing eradication of terrorists, education of local populace, establishment of infrastructure, and the providing of medical aid. Recently, CDR Val Castillo, MSC, USN, talked with Navy Medicine about these "pillars," giving insight into the campaign being waged in the southern Philippines against the Islamic militant group Abu Sayyaf. Serving as the Medical Operations Officer from May to August 2002, he revealed the new challenges the Navy medical community faced while being part of Joint Task Force (JTF) 510 in the jungles of Basilan Island and Mindanao.*

* * *

Staging Area

The jungle island of Basilan, located south of Zamboanga, has been an ideal base for the Abu Sayyaf for a number of years. In a reign of terror not restricted to the island of Basilan this Muslim guerrilla organization has bombed a Philippines Airlines plane, unleashed a grenade attack in a Zamboangan department store, savaged villages, and kidnapped hundreds, most notably, American missionaries Martin and Grace Burnham in May 2001. On 11 September the world of terrorists had slithered into

hiding from the U.S. for the last time. Soon after the devastation, political arrangements between the U.S. and the Philippines called for a "MacArthurian" return of U.S. forces, without the establishment of military bases.

In 2002, the JTF 510 deployed with 1,400 U.S. Army, Navy, Marine, and Air Force Special Forces units along with engineers to Basilan Island. The immediate task at hand was not the rescue of hostages, but the preparation of the Armed Forces of the Phil-

ippines (AFP) in counter-terrorism tactics. Additionally, the JTF aimed to help the disadvantaged islanders through building schools, providing medical care, and paving roads. As CDR Castillo points out, "The United States has a long history of helping the region. As a matter of fact, 'Black Jack' Pershing has a park named after him in Zamboanga. He was an administrator there and the 84-year-old mayor of the city still remembers the days when General Pershing helped alleviate the suffering of her

people through good will.” However, there have been limitations. As CDR Castillo emphasizes, “Aid and government assistance in the present day Philippines ends at Zamboanga, leaving islands like Basilan in abject poverty and neglect. Al-Qaeda thrives in such chaos and uses the disenfranchised to recruit operatives and preach their message of hatred.”

The Pillar of Medical Care

The AFP Base hospital at Camp Navarro, Zamboanga served as the base for medical operations. However, medical care differed greatly from that given at base hospitals. CDR Castillo explains, “If we have Special Forces we have to go light. We have what is called a ‘SPEAR’ or a Small Portable Expeditionary Aeromedical Rapid Response Team. This is a flexible, rapidly deployable and task-organized medical team, in this case, made up of five USAF medical officers, ICU nurses, and medics. This SPEAR was set up at the base hospital at Camp Navarro, where Navy and Air Force medical staff were given an operating theater and two rooms to work from. The SPEAR could further task organize and set up a one-bed or more holding company in a landing zone for helicopters or on a landing strip for C-130s. This allowed for a transportable Level II capability, with the objective of stabilizing patients for further transport to U.S. Naval Hospital Okinawa, where more robust medical capabilities were available.”

Aside from serving the Special Forces and AFP, the U.S. medical teams also assisted with treatment of Abu Sayyaf casualties. CDR Castillo recounts a firefight between U.S.

Marines and Abu Sayyaf in June 2002. “Luckily, no American was injured. The Abu Sayyaf on the other hand had many casualties. According to Geneva Convention protocol, the injured and those captured alive were sent to Camp Navarro. One captured Abu Sayyaf militant had a gangrenous leg from a previous engagement and needed immediate amputation. Abu Sayyaf terrorist groups do not have any organic medical care and this is the reason medical providers are a prime kidnapping target.” A fine example is Filipina nurse Ediborah Yap who was later killed along with Martin Burnham in an AFP rescue effort.

When Mrs. Burnham was finally rescued, Castillo coordinated her medevac and made certain that she remained hidden from the media while she was recuperating. “This was one of my biggest challenges,” comments Castillo, “I had to stay in the Joint Operations Center during the rescue efforts to be able to coordinate her medevac flights. It was my responsibility to link with a U.S. Embassy doctor and ensure that Mrs. Burnham received follow-up care. Nothing was more satisfying than to see Mrs. Burnham reunited with her family back in the States and to know we played a part in speeding up her recovery for this reunion.”

Familiar Ground

CDR Castillo was not selected by accident for this mission. He is a graduate of the Naval War College and has intimate knowledge of two dialects of Tagalog, the native language of the Philippines. His language skills proved invaluable as he translated for JTF Commander, BGEN Donald C. Wurster, as well as

physicians treating Filipino commandos and rangers wounded in their encounters with Abu Sayyaf and the Moro Islamic Liberation Front.

In addition, his knowledge of the geography and terrain proved extremely helpful in the establishment of a medical logistics system that provided over a quarter of a million dollars of medical supplies to 20 medical outreach units on Basilan Island. In some cases, CDR Castillo found himself negotiating directly with Filipino doctors and nurses to provide their medical skills to impoverished regions of the southern Philippines in return for receiving medical supplies to do the job. “It takes knowledge of the culture to do that. We ask them that if we provide medical supplies would they come and take care of the people and provide them with doctors, dentists, and optometrists. A lot of people there have cataract problems, and there are a lot of children with worms and bloated stomachs.”

Often, the problem is not supplies, but finding the right providers who will conduct sick call and provide medical care to the local population. Castillo tells of a head of household in a Basilan village who was not able to work for 3 years because he lost his ability to see clearly due to cataracts. American medical supplies combined with the skills of a Filipino ophthalmologist corrected this. Treating the breadwinner means the entire family is positively affected. “This is the policy of winning hearts and minds one patient at a time.”

To reinforce care among the AFP, Navy and Air Force medical teams educated the Philippine Army on the treatment of gunshot and mortar wounds and provided trauma care

courses. Castillo recalls, "The lessons in trauma nursing were so popular that emergency medical personnel from area hospitals in Zamboanga attended."

Logistical Problems

But all was not without tribulation. Supplies were flown from the U.S. to Okinawa, Japan using the Single Integrated Medical Logistics Management (SIMLM) System and then transported daily to Cebu and then to Zamboanga. Daily van and truck convoys traveled from Camp Navarro to the airbase. CDR Castillo adds, "The daily convoy to the airbase in Zamboanga was a treacherous 20-minute drive through dense traffic and was an ideal ambush spot for Abu Sayyaf terrorists. Typically, the terrorists would throw explosives from motorcycles into stopped cars or conduct a machine gun attack on motorcycles targeting Army convoys." During CDR Castillo's tour, a nail bomb ripped through a restaurant frequented by American Special Forces troops, killing one sergeant. "The rules of engagement required that all personnel leaving Camp Navarro be armed with more than just a 9mm pistol," recounts Castillo. "Medical logistics personnel would always sweat it as they approached five vulnerable choke points in traffic that led to the airbase. The medical evacuation route typically mirrors the logistical route and this needed to be monitored daily as it provided lifts of opportunity for potential casualties."

"The medical evacuation plan consisted of buddy aid at Basilan Island by Special Forces medics and then a helo ride to Zamboanga where the Air Force SPEARR team treated and sta-

bilized casualties," explains CDR Castillo. "From Zamboanga, the patient would take a C-130** to Okinawa for Level III care and further reconstructive surgery." Additionally, there were no U.S. equipped ambulances in Zamboanga. Patients were moved using vans that were outfitted for movement of medical cases. Castillo points out, "It was vital that the patient be stabilized before placing them in a van. There is simply no room for the portable resuscitation equipment we take for granted in the U.S."

Good Will Hunting

The Defense Reutilization and Marketing Organization (DRMO), a group known for distributing military surplus to needy populations, provided CDR Castillo and his medical team with arctic cold weather jackets for the villagers of Basilan. According to CDR Castillo, "In 104-degree heat of the Philippine jungle this gift initially did not make sense. However, when you realize that there are fishermen in Basilan who travel far away from land and brave the cold weather of the seas, the jackets make perfect sense." In another circumstance, Castillo and his crew were able to give DRMO trench tools to a leper colony that subsisted through farming. "I was told by the head of the NGO [non governmental organization] that before we donated these tools, a nun working with these lepers brought everyone in to pray for gardening tools. Two weeks later when he called up to ask her if they could use this trench equipment the nun simply broke down in tears of joy."

According to Castillo, all members of the JTF 510 spread goodwill

throughout the region. In one case a Navy Dental Corps commander's tireless efforts and willingness to travel throughout Basilan helped save the medical evacuation of personnel for dental problems. Another Navy dental commander attached to a Marine unit was so gung-ho that his desire to treat patients saved Castillo from medically evacuating many military personnel for dental problems. "He made dental calls all around the base and even assisted in our humanitarian efforts. We often joke about our corps, but out there we are all one military medicine family. Only in an operational setting can you truly appreciate how the different corps of Navy medicine come together to do so much good." Indeed, the prophetic words of Lao-Tzu seemed applicable in this operation. "Treat those who are good with goodness, and also treat those who are not good with goodness. Thus goodness is attained." □

*Abu Sayyaf—"Father of the swordsmen" in Arabic—was a mujahedin fighter who fought the Soviet-backed Afghan regime in the 1980s.

** Although DC-9s could land at Edwin Air Base in Zamboanga, the lack of armor plating in their undercarriages required the use of C-130s.

LCDR Aboul-Enein is a Medical Intelligence Officer currently assigned as Middle East Country Director at the Office of the Secretary of Defense.

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Project Windstorm

A Cold War Memoir

CAPT James Helsper, MC, USN (Ret.)

Part II

Destination Unknown

Dick and I ran topside and watched as the lines holding *Aiken Victory* to the dock were released and the engine began grinding away somewhere deep within the ship. The tugs had now taken lines and were chugging along, pointing the ship out to sea.

We moved slowly but surely away from the dock with much waving and shouting from loved ones ashore to the crew on all levels of the ship. I had no one to wave to, so I waved goodbye to everyone. The ship slowed as the pilot was put aboard a small boat at our side. The lines were then tossed to the tugs; we were on our own. The course was southwest for a time, until we were in deeper water, and then we came around right, heading northwest. To where? At least our northward heading ruled out Antarctica.

Lunch was just sandwiches piled on a plate in the mess, since everyone was busy doing the many chores of putting out to sea. Even the MCB 3 men were busy checking the safety of their equipment scattered throughout the ship. Most important was the tension of the chains and steel cable holding the heavy machinery on deck.

Dick and I went to sick bay to help with sick call, but nothing different or exciting awaited us there: a few cases of GC (gonorrhea), imagined seasickness, and URIs (Upper Respiratory Infections). We talked with our chief and the 1st class corpsman and learned what supplies they had been able to bring along. They told us we had been assigned combat medical gear which was stowed in footlockers for portability, but included a small x-ray machine and OR lights, as well as many types of drugs and antibiotics gleaned from the dispensary at Port Hueneme.

I soon learned that “glean,” “glom on to,” “cumshaw,” and “borrow” were other words for “steal” but that was the name of the game. The attitude was that “this stuff belongs to the Navy and I’m in the Navy. That means I can use it since I think I need it.” They knew where some of our medical gear was stored, so we went down into the cargo hold to check it out. It didn’t look very impressive down there, but perhaps there would be more hidden among the tons of stores packed in the hold.

The chief said he would send MCB’s gunnery sergeant to pick up,



clean, and check my new guns. The following day I met the Marine sergeant on the fantail to test my newly cleaned weapons. There was a lot of kick to the .45 pistol but it and the carbine worked, and I could return to my quarters. Gunny had given me a little gun-cleaning kit and had me use it so I would be comfortable doing it. I had an uneasy feeling about doctors carrying guns, even in war, but I didn't share this with anyone else.

Supper was more formal than lunch, and we were all introduced to the ship's skipper and his crew. I learned that there is a long held tradition in the Navy about who sits where in the officer's mess, rank and date of rank being the determining factors; the more junior, the farther away from the skipper, but this was not enforced on *Aiken Victory*.

A movie would be shown in the mess hall after supper, but our MCB 3 skipper asked that we meet in his office for a discussion regarding our mission, a subject eagerly looked forward to by everyone. Of course, it was too late to tell anyone ashore. We were cut off from the world except for military communications.

I had met our dentist, Gus, who hailed from Utah, ruddy but soft-spoken, and more serious than Dick and I. He assured us he knew how to give anesthesia, a great relief to us.

Top Secret

In the small office headquarters of MCB 3 aboard ship we met the rest of the officers. After shaking hands all around, the skipper began to tell us about our mission. First he warned us that this was top secret, and we were not to tell our men anything about the mission details. Further, since all of us didn't yet have our official secret clearances, he could only tell us the mission's bare outlines.

We were going to an island in the far northern Pacific to build the infrastructure to explode the first underground atomic bomb. We were never to communicate this to anyone else, and if we tried we could be court-martialed for treason. At this point the yeoman handed out forms marked "QUEEN Clearance" from the Atomic Energy Commission, about 10 pages of questions going all the way back to our grade school years. Many of the questions appeared to be silly. These were to be completed and handed in before docking on the island.

The skipper told Dick and me that we would have to build a small hospital, and that only in the rarest of circumstances would we be able to evacuate any patients, no matter how sick they were. He said there were two reasons. One was to maintain the secrecy of our mission, and the other was that the weather was often so inclement that planes would be unable to land there for up to a week or more. Any medical equipment not with us we would obtain, enabling us to manage any medical or surgical situation.

Dick and I looked at each other with knowing glances. We would discuss this among ourselves before telling the skipper that this was a pretty impossible task. We had both trained in hospitals with large staffs and all kinds of sophisticated equipment. We were dismissed and returned to our quarters to mull over our plight.

We had made a run to the euphemistically labeled "wine mess" before embarking, but our liquor supplies surely couldn't last for a year. There was always medical whiskey entrusted to the medical officers, and I hoped we had enough of that. The Navy used the system of small 2-ounce bottles, like those sold on passenger airlines. They had to be ac-

counted for just like the narcotics, and were always under lock and key.

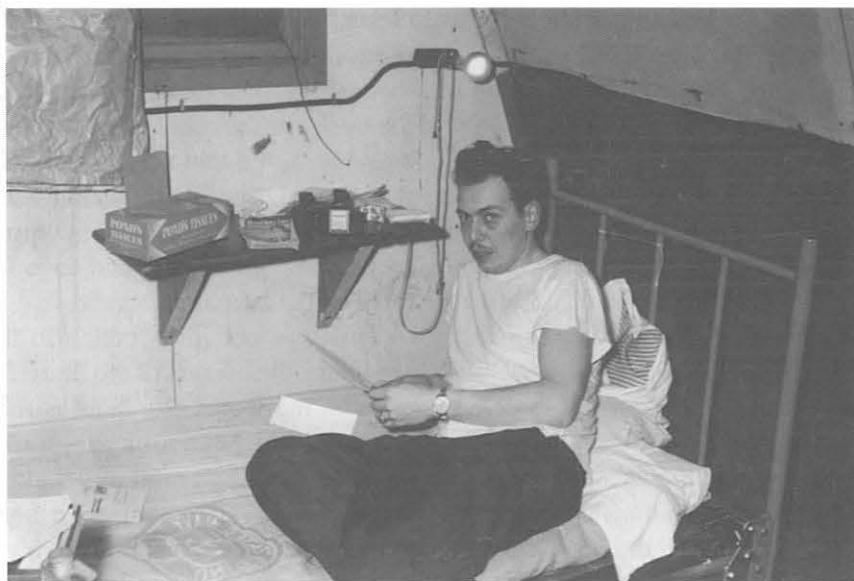
We talked over what we knew about atom bombs, and tried to figure out why we, specifically, had been selected for this trip. The first atomic bomb had been exploded on 16 July 1945 in New Mexico. The next two were dropped from B-29s on Japan just 3 days apart, the first over Hiroshima on 6 August 1945, and the second over Nagasaki on the 9th. These had ended World War II. Then there were naval tests done in July of 1946 on Bikini Atoll in the South Pacific to test the effect of atom bombs on Navy ships. Except for this last one, they were all air bursts. None had yet been exploded underground.

President Truman created the Atomic Energy Commission in July 1946, which transferred control of atomic energy from the military to a civilian agency. The Soviet Union detonated its first atomic bomb on 29 August 1949. We knew a few days before sailing that the president had authorized development of the first H-bomb, a doomsday device if ever there was one. There were also plans to explode more bombs on Eniwetok Atoll out in the Pacific, but we would probably be away for that.

We couldn't understand why we had been chosen for this task, but it made sense that if an underground shot had to be made, it would be in a place remote and useless to the world at the time. We hoped it wouldn't be the H-bomb!

Chief Medical Officer

A surgeon would be a necessity on this remote island since we wouldn't be able to evacuate patients to a hospital. We would have to teach ourselves about radiation protection, and whatever else was necessary to know before the time for the atomic explo-



The author in his Quonset hut quarters.

sion. Of course no one knew what might happen after an underground nuclear explosion; That's why it was called a "test." A worst-case scenario was considered where a "super bomb" exploding underground might start a chain reaction in the surrounding earth, and who knew whether the whole world would disappear in a giant atomic cloud.

By the next afternoon we were more than 100 miles offshore on our northwest course up the Pacific coast. I heard my name on the overhead paging system requesting my appearance before the skipper on the double. I thought perhaps someone was injured so I raced up there, ready for anything. I was quietly ushered into the skipper's office and asked to sit down. The skipper said his yeoman had done a date-of-rank study, and found that my date preceded Dick's; therefore I would be the chief medical officer for the expedition.

"Dr. Helsper, I want you to know that this will be the most important job you will do in your entire life and, despite being a reservist, I hope you will be up to it."

This really didn't impress me much, but it seemed very important to him. Dick and I were already good friends and we would work together in harmony no matter who was senior.

The skipper congratulated me, adding that he thought even a reservist could come up to this vital mission. I could hardly suppress a chuckle as I left to share this momentous information with Dick. After laughing ourselves silly, we just made it to mess on time.

As the routine of shipboard life set in, we searched for materials to read about atomic energy, but very little was available. The sea was kind and gentle, even becoming glassy smooth with clouds high overhead. Suddenly we arrived in an area covered with birds feeding on a school of fish so enormous that we sailed through it for most of the day. It was hard to believe that there were so many birds this distant from land. But there they were—millions of them—feasting on still more millions of fish.

The next day we were promised a little blow. As the wind picked up, eventually creating giant waves, we

realized it was more than a little blow; it was a typhoon! Lines were strung on the deck and in the passageways as the ship began to roll and toss. The rolls continued further and further each time. At the end of each roll the ship just seemed to hang there for an eternity. Then it would roll back to the other side with the same hesitance as at the end of the one that preceded it. I began to think there would be a time when it would completely roll over and we would all drown. There was another violent motion as well. The ship's bow rose up in a giant wave, then slammed down in the trough. Bending vibrations ran fore and aft the length of the ship, shaking it like stick. The noise of the howling wind and the groaning vessel became overwhelming as we continued plowing through turbulent seas.

Sick bay became clogged with heaving and bilious-looking Sailors. We did what we could, but the crew had to ride it out as we did. I became sick myself and tried to go to bed. After vomiting for the sixth time, I began to think that I wasn't cut out for the Navy after all. I found out what the board on the bunk was for. I enclosed myself in the bunk and rode out the storm tossing from board to bulkhead. We were later told that the ship had rolled 45 degrees to each side. Except for a few "old salts," no one ate during the storm.

Dick fared better than I. He kept busy by starting IVs for dehydrated Sailors. Fortunately, there were no broken limbs and no one on deck fell overboard. The heavy equipment lashed to the deck was not damaged. We novices felt lucky to have survived such a storm.

Amchitka

After more strategy meetings with our skipper and the engineers and

planners for the project, we finally learned the name of the Aleutian island—Amchitka. It lay about two-thirds of the way out the chain, past the 180 degree meridian at 179 west longitude, beyond where the new day begins. The International Date Line was on the 180 degree meridian exactly half way around the world from Greenwich, England. However, the date line was bent around the Aleutians so that all the islands would be in the same day.

Maps and atlases from the ship's library showed Amchitka to be 38 miles long and 3 miles wide, running in a northwest-southeast direction. It was the most southern of the Aleutians at about 51 degrees 32 minutes north, 765 miles from the mainland Alaskan Peninsula, and 870 miles from Petropavlovsk in Russia. The island was even closer (670 miles) to landfall on the Kamchatka Peninsula in Eastern Russia.

Amchitka had been abandoned by the Army after World War II. Indeed, the Aleut natives had left in 1849, suggesting to one and all a certain lack of hospitality on the island. Perhaps the Navy should have taken this into account. It was 1,340 miles from Anchorage, and from the maps it looked pretty lonely out there.

The wind and waves picked up, and we began to think the worst about the weather conditions for our new home. The navigation charts showed the eastern end near the harbor to be fairly low and flat (the location of most of the buildings and runways left over from the Army's earlier occupation). The western end on the navigation maps appeared mountainous, with peaks to 1,200 feet. A spit of land partially protected the harbor and dock. It was known as Constantin Harbor, and it could accommodate fairly large ships.

The night before we landed, the ship sailed through the Amchitka Passage to the east of the island as it crossed the Bering Sea. Some claimed they could see the island low and forbidding on our port horizon by the light of the moon. The ship slowed in order to time the arrival in port soon after daylight. The weather had turned much colder. Snow began to fall, whipped horizontally by a wind that whistled through the rigging. It became difficult to walk the decks. We wondered how the weather could be so bad in the Aleutians when the islands were at a latitude just a few hundred miles north of Seattle (about 51.5 degrees north compared to Seattle's 47.5 degrees north). The inclement weather couldn't be due to the proximity of the islands to the North Pole. The ferocity of the weather, we learned, was due to the meeting of two oceans split only by a thin string of islands. The Pacific, driven by the Japanese current, brought warmer water to meet the Bering Sea, with its huge current of much colder water from the Chukchi Sea, as well as from the arctic itself. The junctions of two enormous bodies of water meeting with waters of vastly different temperatures resulted in the horrendous weather we were now encountering.

The morning light brought Constantin Harbor into view. It was in a small bay partially protected from the north wind at its western end. The pier was in the northwest section of the bay. We were moving very slowly now since there were no tugs to help warp the ship against the small rickety dock.

A loud barking caught our attention. We saw strange animals swimming on their backs and striking themselves in the chest with something held in their forepaws. As we drew

closer, we could see they were slamming one oyster against another on their chests, then barking excitedly as the oyster broke open. They immediately devoured these delicacies, and then barked happily to announce their success. Then, with several more barks, they turned over and dove for more of the succulent bivalves.

This was our introduction to the sea otters, the owners of the finest fur coats in the world. We later learned that these Amchitka animals were the largest remaining group of sea otters in the world. They had once been thought to have been entirely extinct. A small group, found off the California coast in 1937, was a different species, and laws were subsequently passed to protect them. These Aleutian otters stood apart because of a variation in their fur, which made them more desirable.

They were happy, intelligent little animals with faces that resembled dogs. Some even appeared to possess a perpetual smile, no doubt the reason they were known as the "clowns of the sea." One of the larger sea otters seemed to dominate the rest, and was soon dubbed "Oscar the Otter." As they stared and barked at us, we were dazzled by their apparent show of welcome.

A small detachment from the Battalion had been flown up a few days earlier (confirming the Port Hueneme bartender's remarks about a small group leaving before we sailed). They had made some preliminary preparations for our arrival, and we could see them waving from the dock. They caught our lines, canceling the need to send men ashore in a small boat to do this.

We moored, lowered the gangplanks, and the cranes aboard ship began unloading the heavy machinery on deck. Our own mobile cranes be-

gan helping with the unloading as soon as they were on the dock. Sailors opened the cargo holds and the pallet loads of stores were piled on the rickety pier.

An intact hangar on the main runway, located about 3 miles from the dock, was built by the Army during World War II. This was to be our first home. We noted that the treeless island had a thin layer of snow with muddy dirt roads badly rutted by run-offs, which would need immediate repair by our bulldozers and carryalls.

We arrived at the hangar by truck. Nearby were a few abandoned Quonset huts and dilapidated buildings remaining from the Army's previous stay. The hangar looked in better shape. Crews immediately set up giant portable heaters we had brought with us to heat the place. The electricians provided a generator. It was amazing how quickly we had working lights. We could already see the value of a Seabee construction group to get things livable and functional anywhere in the world. And we knew Amchitka would be the real challenge!

Aiken Victory's captain was most anxious to leave because of the high winds and another expected storm. He threatened to leave at nightfall whether we had everything unloaded or not! Everyone worked extra hard to unload the ship as quickly as possible, piling all the goods on the dock. Sure enough, the ship's crew used its previously dropped anchor to pull the vessel away from the dock at nightfall, and she was out of sight in less than an hour.

The galley crew cooked our first meal in the hangar, served under the bright overhead lights rigged by the electricians. There were rooms on either side of the hangar at ground level,

as well as on a second deck. These were set up with bunks, but not enough for everyone. Those sleeping on the hangar floor wondered for how long.

Our 10 corpsmen were assigned to one room on the second deck, and Gus, Dick, and I had the adjacent room. We unpacked some of our medical gear, and set up sick bay in a third adjacent room. We were in business! Homesickness was prevalent that night, as each man began to realize what lay ahead for us. I heard some of the younger men crying themselves to sleep. Indeed, this was a scary assignment! Sailors usually go to sea for 30 to 60 days, with port calls to look forward to. Instead this was a 1-year stint. To have this long a time away

from home and loved ones was more than some could bear. We were thousands of miles from home—hundreds from the nearest civilization. There were over a thousand men from all walks of life, and we would have to depend on one another for everything. We were alone on a remote island, with atrocious weather and an enormous job to do.

The wind howled at night, contributing to the feeling of loneliness and a little despair. Dick, Gus, and I talked far into the night about our situation and agreed to make the best of it. Some of the help in handling this separation from loved ones would have to come from us, but even more so from our chaplain. We suspected that he would have his hands full. □

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Dr. Helsper takes target practice with his new .45 off *Aiken Victory's* fantail.

The Unsolved Mystery of USS *Bennington*

Richard S. Pope

The morning of 26 May 1954 was a startling wake-up call. USS *Bennington* (CVA-20), the carrier on which I served, was wracked with a severe explosion. Within moments, there were over 200 casualties with over 100 dead. As the operating room corpsman, my duty station was in surgery.⁽¹⁾

Injured men were carried into surgery within a few minutes. The first casualty was brought in supported by two officers, but was apparently ambulating. He arrived about 5 minutes after general quarters was announced. The uniforms of these officers appeared to be ready for inspection. On quick observation, there was no evidence of burning or other signs of fire. The injured officer was placed on the examination table and those who had assisted him into surgery immediately left. Thus there was no opportunity to gain any information about what or when any injury occurred.

By the time I looked to the injured man, it was clear he had died. It was not even certain he was alive when brought to surgery even though he had appeared to be walking with assistance. This scene of an apparently non-injured man being carried or assisted into the operating suite was quickly followed by several more men arriving in a similar fashion and with similar appearance. Within a few minutes, surgery contained six dead men, all without evidence of injury. Others would soon follow.

It was now clear that the ship had undergone a serious incident. The number of patients now within our small space and in such a short time, attested to this conclusion. There was no information transmitted to me by any of the assisting officers who brought their comrades into surgery, either regarding the nature of the incident or details about the injured.

All patients were dressed as for inspection with uniforms clean and

without apparent burning or disarray. There were no indications of injury, either obvious trauma or burning. There was no discoloration of lips or skin. Above all, no one provided us any information.

Differential Diagnosis

A differential diagnosis of sudden death is broad. It includes heart and vascular diseases, such as atherosclerosis, rupture of aneu-



USS *Bennington* (CVA-20) fresh and ready 1953.

Photos from www.uss-bennington.org

rysms, traumas, poisonings, and asphyxiation. The differential for this group of young men was much shorter because they were all naval officers presumably in good health yet serving in a demanding environment. They all would have had exhaustive physical examinations within the past year.

Because there were no obvious physical deformities the differential grows shorter still. Physical examination in all cases revealed no obvious injury with the exceptions of a fracture of the left radius in one man, and burning fat tissue in the lower right back in another case. Neither of these injuries was a cause for death.

The timing of death was sudden, that is within about 10 minutes. This assumes that the time necessary to reach the sick bay from the forward third of the ship following the explosion would not be more than a few minutes, especially assuming that speed was a consideration in the minds of the companions.

The cause of death was not physical trauma since there was no evidence of such from the condition of the uniforms and general appearance. Only the single fracture would suggest any physical force and this was evident in only one case. None of the uniforms showed evidence of burning. Even in the single case where there was still burning fat there was no evidence of burn on the exterior.

The cause of death for these men remains a mystery. Postmortems were not performed. Thus we are left with speculation. The explosion aboard *Bennington* was caused by combustion and explosion of hydraulic fluid which had leaked from the catapult system.(2) The leaked hydraulic fluid had seeped to lower decks and reached such a concentration that ignition was inevitable. That source of

ignition could have been the lighting of a cigarette or a spark from an undetermined source. Nevertheless, the resulting flames engulfed many spaces. Sailors described running from sheets of flame. Such combustion could well have consumed all available oxygen resulting in asphyxiation, explaining the lack of visible trauma and no discoloration because of the rapidity of death. If this speculation is correct, was there anything that could have been done at the time? More importantly, are there lessons from this almost 50-year-old tragedy?

Epilogue

The board of inquiry indicated that the hydraulic fluid used in the catapult systems met specifications and was both non-explosive and non-flammable. However, there was no indication that the specifications included a range of possible concentrations of the hydraulic fluid. Thus,

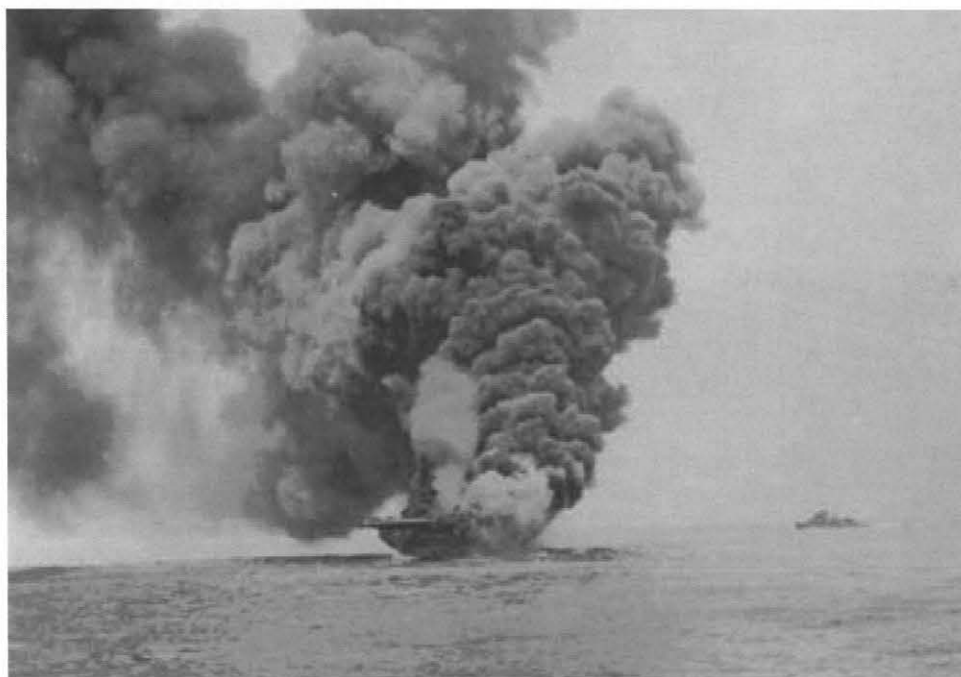
under normal conditions the hydraulic fluid met specifications. Abnormal conditions were apparently not considered. If the specification had covered a range of normal and abnormal conditions, the explosion aboard *Bennington* might not have occurred. The possible seriousness of a slow leakage of hydraulic fluid might have been considered an emergency and the Sailors who tended the catapult system would have tended to leaks. Even minor leakage would have been considered in a different light.

References

1. Court of Inquiry, Headquarters, Command Fleet Air, Quonset Point, RI. 26 May 1954.

2. Pope RS. *General Quarters: Memoirs of the Explosion on the CVA-20 USS Bennington*. Binford and Mort Publishing. Portland, OR. 1994. □

Mr. Pope served as a hospital corpsman aboard USS *Bennington*. He resides in Portland, OR.



On 26 May 1954, while cruising off Narragansett Bay, the fluid in one of *Bennington's* catapults exploded setting off a series of secondary explosions which killed 103 crewmen and injured 201 others. *Bennington* proceeded under her own power to Quonset Point, RI, to land her injured.

It's Not Just a Job

Our medical journal, *Navy Medicine*, began in 1943 during the dark days of World War II as a weekly paper—the *BuMed Newsletter*. It matured as a monthly, the *U.S. Navy Medical Newsletter* in 1948, *U.S. Navy Medicine* in 1971, and, in 1989, today's bimonthly *Navy Medicine*. I have served as its editor since 1979, two-fifths of the publication's age. Because major anniversaries tend to focus one's attention, this special birthday has given me cause to do a bit of reminiscing. It all began for me on 3 March 1979 when I sat down at my new desk at BUMED.

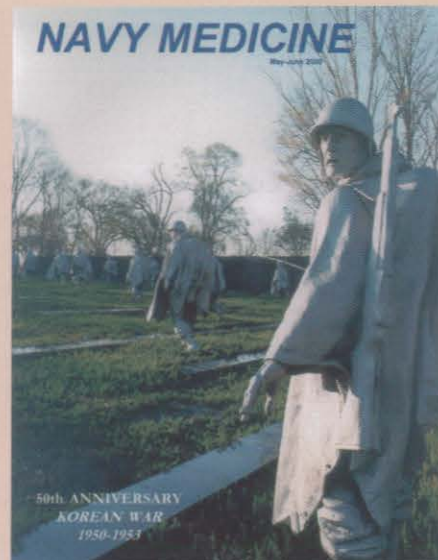
"It's not just a job, it's an adventure," the Navy recruiting ads ran. Was it all Madison Avenue hype, I thought, or would editing the Navy's medical journal really prove to be the kind of adventure I sought in a profession?

Publications weren't completely foreign to me, even though the theme of this one was. Despite what I had told the young ensign who interviewed me, my knowledge of military medicine and what were called the "sea services" was minimal. Oh sure, I had spent 4 years as an Air Force dental technician and learned the rudiments of dentistry, but the mouth is but one human orifice, a puny percentage of the whole. More sobering was *U.S. Navy Medicine's* readership—physicians, dentists, nurses, hospital administrators, entomologists, preventive medicine specialists, physical and occupational therapists, podiatrists, hospital corpsmen, dental technicians, etc., etc., etc. Earning credibility with these folks seemed daunting indeed.

My transition to the Navy was not unlike entering a new marriage. You

wed the wife and they throw in her family. Having become accustomed to the vocabulary of the State Department, where I had previously worked, I now required a primer in sailor talk. "Carry on" means to continue to do what you are doing and not act like a drunken fraternity brother. Civilians are called "sand crabs." Floors are "decks" and ceilings are "overheads." A snack bar is a "geedunk," bathrooms are "heads," and navy blue is really black. People with eagles on their collars are not colonels but captains. The captains I had once known in the Air Force were junior officers who wore "railroad tracks"—two silver bars. In the Navy, majors are called lieutenant commanders, and commanders wear the same collar devices as lieutenant colonels. Such rudiments of the Navy hierarchy would take time to learn, and I would grow to appreciate the experience of an old Navy veteran who told me of his trials as a junior officer. Reprimanded for having failed to salute a superior, he began saluting every uniformed person he encountered, including bus drivers and hotel doormen.

The magazine itself seemed an enigma to the uninitiated. Did the Navy's medical community really find enlightenment in such articles as "Painful Punctate Foot Clavis" and "The Agony of Necrotizing Ulcerative Gingivitis?"



50th ANNIVERSARY
KOREAN WAR
1950-1953

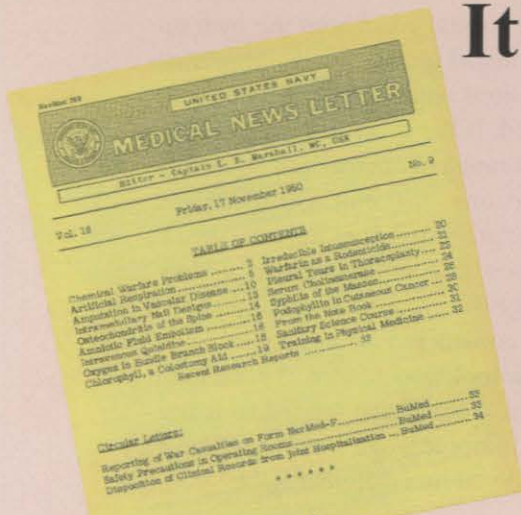
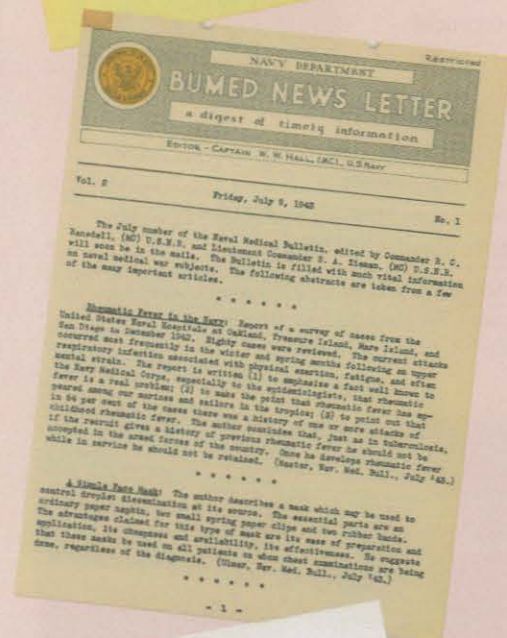


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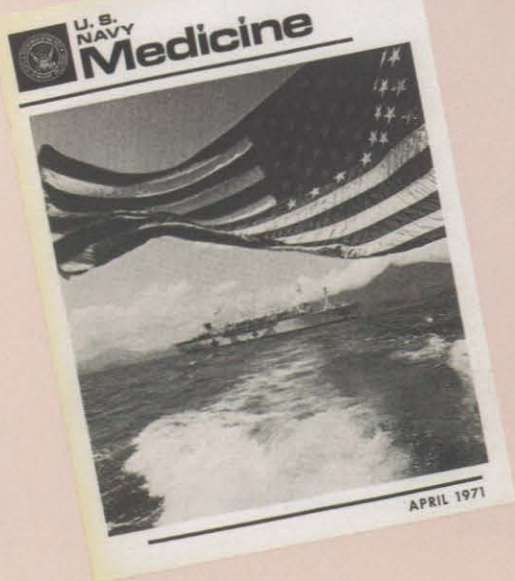
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Safety Precautions in Operating Rooms
Composition of Clinical Records from Joint Hospitalization

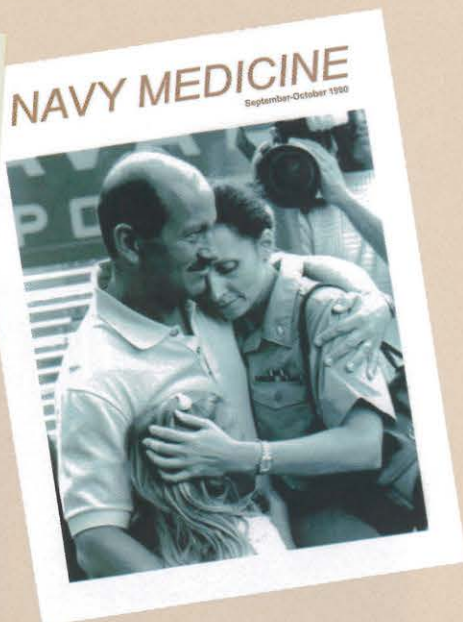
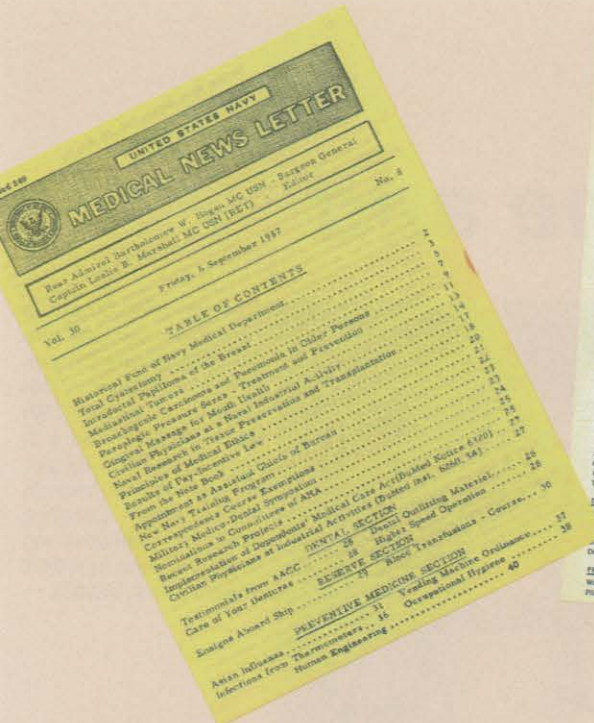


The July number of the Naval Medical Bulletin, edited by Commander R. C. Ransell, (MC) U.S.N., and Lieutenant Commander S. A. Hines, (MC) U.S.N., will soon be in the mails. The Bulletin is filled with much vital information of the many important articles.

Rheumatic Fever in the Navy Reports of a survey of cases from the United States Naval Hospital at Oakland, Treasure Island, New Island, and San Diego in December 1942. Slight cases were reviewed. The current attack occurred most frequently in the winter and spring months following an upper respiratory infection associated with physical exertion, fatigue, and often dental strain. The report is written (1) to emphasize a fact well known to the Navy Medical Corps, especially to the epidemiologists, that rheumatic fever is a real problem; (2) to make the point that rheumatic fever has not passed among our marines and sailors in the tropics; (3) to point out that in 50 per cent of the cases there was a history of one or more attacks of rheumatic fever. The author concludes that, just as in school children, if the record gives a history of previous rheumatic fever he should not be accepted in the armed forces of the country. Once he develops rheumatic fever while in service he should not be retained. (Navy Med. Bull., July '43.)

A Simple Paper Mask The author describes a mask which may be used to control droplet dissemination at its source. The essential parts are an ordinary paper cup, two small spring paper clips and two rubber bands. The advantages claimed for this type of mask are its ease of preparation and application, its cheapness and availability, its effectiveness. He suggests that these masks be used on all patients in whom chest examinations are being done, regardless of the diagnosis. (Navy Med. Bull., July '43.)





In the years that followed, I learned the Navy vocabulary and fully immersed myself in the heritage of the Medical Department. Like the rest of the BUMED staff—both uniformed and civilian—I rolled or reeled with the punches as the Bureau periodically reorganized or “realigned.” Codes changed their numbers and, at one point in 1982, and for the next 7 years, BUMED temporarily went out of business as the experiment known as the Naval Medical Command played itself out.

There was also adventure. Since the practice of Navy medicine is not confined to the nation’s capital, I sought to “get the story” where medical personnel did their jobs, providing healthcare to the men and women of the Fleet. I found myself hitching rides aboard carriers at sea like USS *Nimitz* and USS *Theodore Roosevelt*, experiencing close up just how complex and dangerous a working environment can be. I visited the National Steel and Shipbuilding Company in San Diego and watched the process of converting supertankers into hospital ships *Mercy* and *Comfort*. Then there was an eye-opening week at Camp Lejeune’s Field Medical Ser-

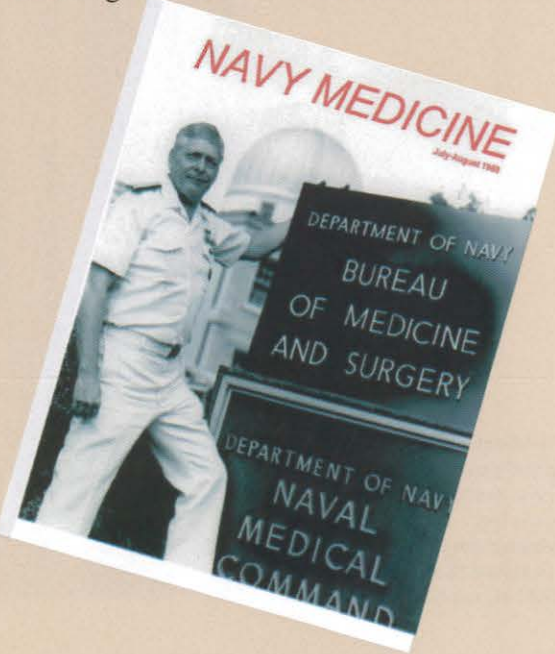
vice School to learn how hospital corpsmen train for the Fleet Marine Force.

Because Navy medical personnel are also an integral part of the space program, I found myself at the Johnson Space Center interviewing CAPT Joe Kerwin, the first American physician to practice medicine in space as an astronaut aboard Skylab. In the years following, there would be other interviews with astronauts, most notably CAPT Jerry Linenger before and after his 6-month sojourn aboard the Russian Mir space station. And I would witness the thrill of Jerry’s two dramatic launches aboard the Shuttle from the Kennedy Space Center.

In my other role as the Medical Department’s historian, I met and interviewed some of our most notable veterans—Dr. Howard Bruenn, President Franklin Roosevelt’s cardiologist, Dr. Henry Heimlich, and Wheeler Lipes, the legendary World War II pharmacist’s mate who performed a heroic appendectomy on a fellow crewman while their submarine cruised submerged in enemy waters. Portions of these oral histories and many others have appeared in *Navy Medicine* over the years.

Our nation has been fighting two wars—against terrorism and Iraq—and I am dramatically reminded why Navy medicine, the institution, and *Navy Medicine*, the magazine, exist, and why the Medical Department’s motto from World War II still rings true today with one small modification: “To keep as many men (and women) at as many guns for as many days as possible.”

And as I begin my 25th year as Editor of 60-year-old *Navy Medicine*, I take to heart what many colleagues and visitors have told me over the years. “Do you know that you have the greatest job in the world?” I would not disagree. —Jan Kenneth Herman



Navy Medicine and

A Navy chief hospital corpsman serving with the 15th Marine Expeditionary Unit (Special Operations Capable) (15th MEU (SOC)) holds a 2-hour-old baby Iraqi girl. The infant was born in the Battalion Landing Team 2/1s battalion aid station. (Photo by SSGT Robert Knoll, USMC)

Photos from Navy Newstand www.navy.news.mil



Medical personnel work diligently on a wounded U.S. Marine inside the Casualty Receiving Area (CASREC) aboard the hospital ship USNS Comfort (T-AH 20). (Photo by PH1 Kevin H. Tierney)

Operation Iraqi Freedom

Hospital corpsmen treat a wounded enemy prisoner of war (EPW) after a chemical attack alert sounded. The corpsmen are assigned to Charlie Surgical Support Company, Health Services Battalion. (Photo by MSGT Edward D. Knierly, USMC)



HMC Michael Roberts and HC3 Christopher Pavicek carry a wounded Iraqi soldier to a CH-46 helicopter after a firefight with the 1st Light Armored Reconnaissance Battalion outside the town of Numaniyah. (Photo by GSGT Erik S. Hansen, USMC)



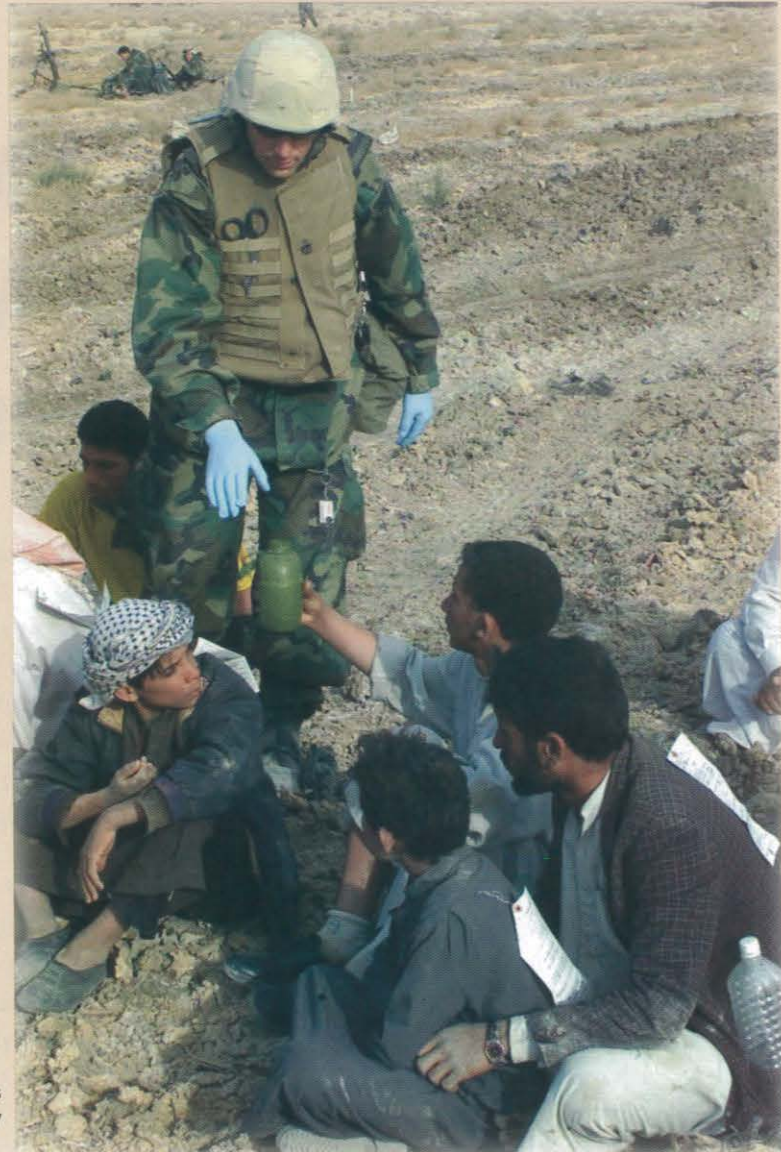
Members of the Air Force's 491st Expeditionary Air Evacuation Squadron and the Navy's Fleet Hospital Eight team up to transfer combat casualties from an Air Force C-141 medevac plane to a waiting ambulance at Naval Station Rota. The aircraft transported 21 casualties from Kuwait to Rota for treatment at the Fleet Hospital. (Photo by JOC Dan Smithyman)



A bus from the Navy's Fleet Hospital Eight at Rota backs into the tail of a waiting C-141. (Photo by JOC Dan Smithyman)



Hospital Corpsman Tiffany Reid instructs crewmembers on the proper use of 2-Pam Chloride injectors aboard USS *Donald Cook* (DDG-75). The 2-Pam Chloride injectors are used to counter nerve agents. (Photo by JOC Alan J. Barbeau)



HMC Michael Roberts provides water to Iraqi detainees. (Photo by GSGT Erik S. Hansen, USMC)

Photo courtesy of Wilton W. Strickland



HMC Jerry Strickland



RADM Horace Warden

Navy Medicine Mourns Members of “The Greatest Generation”

The veterans of World War II are truly a vanishing generation, and I am reminded of that sad reality almost every day. Navy medicine recently lost two distinguished Sailors who saw combat during that conflict. RADM Horace Warden, MC, was a medical officer aboard USS Breese (DM-18), which was moored near Battleship Row on 7 December 1941. His vessel downed one Japanese Zero that day. Nearly 4 years later, during the Okinawa campaign, a Japanese suicide plane impacted Dr. Warden's vessel, killing and wounding many of his shipmates. He spent the next 2 years recovering from his own extensive injuries. After the war, Dr. Warden went on to become an accomplished surgeon, one of President Harry Truman's physicians, a pioneer in the early U.S. space program, and the commanding officer of several naval hospitals.

HMC Jerry Strickland also saw action in the Pacific as a pharmacist's mate aboard one of the Navy's newest carriers, USS Hornet (CV-8). Strickland was aboard when LCOL Jimmy Doolittle and his crew took off in 16 Army Air Corps B-25s from Hornet's heaving deck to drop the first American bombs on Japan. Chief Strickland also survived his carrier's early demise during the ferocious Battle of Santa Cruz Island. The following excerpts are from interviews I conducted with RADM Warden in 1993 and HMC Strickland in 2001 as part of BUMED's oral history project.—JKH

RADM Warden Remembers Pearl Harbor (7 December 1941)

On that Sunday morning we were moored to a buoy near Pearl City. I happened to be aboard the previous night because in those days they used to divide Pearl Harbor into three areas. There was supposed to be a doctor assigned to each area all night for medical coverage. It was my night to be aboard in Pearl City. I was due to go off duty at 8:00 on Sunday morning. I had changed into civilian clothes and was waiting on the deck for a whaleboat to take me to my car so I could go to breakfast at home on the far side of Honolulu. The Japanese hit at five minutes to eight and I never got off the ship.

The first thing I remember was the sound of firing and then they called general quarters. We were not a large ship so we were not immediately threatened. After the Japanese delivered their bombs on the large ships, they had to come up over us. That's when we got one of them with what I think was a 3-inch gun.

It landed right near us in the water. The pilot was still alive so they got a whaleboat to go rescue him. Apparently he made a move—put his hand under his vest or something—so they killed him and then didn't have a live pilot to question. The sailor who shot him was told that he was going to get court martialed. But later that all was quashed and there was no court martial.

After about an hour and a half we were out to sea and started to patrol looking for miniature subs and dropping depth charges. We stayed out about a week and then came back. Then we could see all the damage that had been done. It was just terrible. It was one of those things when you think, what's the world coming to? What's going to happen to us now?

Kamikaze Attack (1 May 1945)

As I recall, it was on the first of May. I shared a nice stateroom with another officer up forward on the upper deck. I was in an upper bunk. General quarters was sounded about 4 in the morning. I was slow getting my pants on, and then tried to get to a door which would get me back into the sick bay. I considered that to be one of the safest places on the ship with steel protection and so forth. But I was slow getting there. I was just getting to a doorway to the wardroom when this thing hit. Pieces of the plane hit me and I didn't get any further. If I had gotten back to the sick bay area as I had planned, I would have been dead because that's near where the engine of

the plane landed. Many of the people we had taken aboard from other ships were waiting for the arrival of a hospital ship. Many of them were killed.

I had a number of wounds, the worst was to the right brachioplexus. Part of it was torn and badly injured. I ended up with a completely paralyzed arm for several months. I lost three front teeth and part of my maxilla. I had cuts on my face, a broken collarbone, broken right radius, and a broken tibia. I also had several pieces of shrapnel in the groin and leg. They had to dig out several pieces of shrapnel from my right thigh. There was a fractured metatarsal, burns on the right foot, a pretty good sized metal fragment under the right achilles tendon. I still have that piece of shrapnel.

Duty as President Truman's Physician (1949-53)

I got to know the president very well and also his family and close friends. The Navy also had a dispensary up at Camp Shangri-la, now Camp David. And, of course, we had the Little White House down at Key West. I was always present when the president was at those places, as well as on the train and plane trips. I used to average four weekends a year at home. If the president wasn't out of town, he was on the yacht. He liked to get a poker group together on the river or on the Chesapeake Bay or for a weekend. There had to be a doctor onboard so I went.

President Truman was an outstanding person to work for. Any place we were, whether it was at home or abroad, if a doctor had to tell him to change his schedule or cancel a trip, he would do it. He always did what the doctor recommended.

He was basically quite well. Like anyone else, he would have minor afflictions, but no major illnesses during the 4 years I was with him. He was a man who liked to walk in the morning. When we were on trips, I was frequently called on to go walking with him in the morning. The people he would bring along—poker players and other friends—would be playing too long the night before and would want to sleep late. I enjoyed walking with him because this was an opportunity for him to use me as a sounding board as we walked about. He would talk about many things. He wouldn't necessarily want an answer or anything like that; he just wanted someone to talk to.

[Away from the White House], I had to be very circumspect about what comments I made because of what I heard as a doctor. As a commander, I had no business

being in on some of those things. And I heard a lot of things on the [presidential] yacht and other places. I was privy to a good bit more than I should have been, but I was very careful not to pass things along that I thought would be, shall I say, of an intimate or embarrassing nature.

The Space Program (1959-65)

During the last 2 years I was [at Naval Hospital Philadelphia], I became involved in the space program part-time. They were getting ready to fly astronauts and they needed a medical recovery team. It was up to the military to provide the wherewithal to do this. There was plenty of money but they needed medical specialists. The Army, Navy, and Air Force selected seven of us as a special team to help. We were called the Medical Recovery Team. I was one of the Navy designees to handle the general and thoracic surgery part.

When the orbital manned flights were planned, they told us what orbits would be flown over water and friendly countries. We figured we would have to have a total of 21 ships on station and a few land-based hospitals. That's a lot of people. We then had to outfit these ships. On each ship we had to have a trained general surgeon, an operating room technician, and a fully trained anesthesiologist plus 1,500 pounds of pre-packaged and pre-sterilized medical gear plus an anesthesia machine so these people could go right to work. These ships also had to be ready to provide fresh blood. The crews had to be cross-matched and typed.

The ships were mostly destroyers but the prime recovery ships were carriers. To get 21 ships in position for one of these flights took a lot of effort. Moreover, we had to get the 1,500 pounds of gear on each one of them. Then we had to get all those surgeons, operating room techs, and anesthesiologists aboard. This was quite a chore because we had to rob Army, Air Force, and Navy hospitals around the world. That would leave these institutions a little short of these specialists during the times they were needed for the flights. But we never had any trouble with people wanting to go. We had plenty of volunteers.

At that time, with the suborbital flight [of CDR Alan Shepard], it wasn't necessary to have the 21 ships on station. That would come later with the orbital flights. We mustered at Cape Canaveral where we had a dispensary set aside for us. We also had facilities at Patrick Air Force Base. Each time a man flew we also had an airplane at

our disposal. This was before jet [transports] so these were all multi-engine planes packed with medical gear. But we never had to use them. Once the orbital flights got going and the capsules began landing very near to where the recovery ships were, we were able to reduce the number of ships on station.

John Glenn's orbital flight was a real cliff-hanger. On each of these first flights, I had a desk in the Mercury control center. When a capsule landed and we figured who was closest, I knew what kind of facilities we could count on. That was one of my chores. When a flight was scheduled, we would go to the Cape a few days early. During the 5 years I was attached to that program, I made 41 trips to Florida.

Repatriation of the USS *Pueblo* Crew (1968)

That was a rough deal. We got word that the people from the *Pueblo* [AGER-2] were being sent back to the states after being freed from North Korean captivity. We had about a week to get ready for them. The Naval Hospital [San Diego] had full responsibility for the men until we found out that they would be OK physically and mentally. The whole thing had international interest. We had to set up special telephones for the press, etc. Having had a lot of experience in these matters from my White House days, I argued that we needed much more than four or five telephones; there would be a large number of members of the international press there. We had a whole building, including a movie theater and meeting rooms. We set up about 15 telephones, long distance, and Western Union. We would keep the press on one side of the compound isolated from the *Pueblo* people. I had another building set up for them. We had them in one- and two-man rooms. That was real good living for them.

We didn't know what to expect from these former prisoners. We prepared for the hospitalization of as many as might need it. All 80 came home on the same plane. I had one building set aside for their quarters, and another, a former enlisted club, became a dining room for *Pueblo* crewmen only and visiting rooms for their families. All this was isolated on one side of the main compound. The only place that wasn't really separate was the naval exchange. At certain intervals, we could close the exchange to everybody else.

They were all ambulatory. We had a medical team examine all 80 of them. We kept them away from the press and well isolated at all times.

It took a few days for us to examine each one of those men physically and mentally but we did.

They appeared to be in pretty good shape. After a few weeks, when we were certain that none of them was in need of hospitalization, we released them to Commander Aircraft Pacific at the headquarters at North Island. They were either released from the service or made available to testify for the court of inquiry.

HMC Strickland Remembers the Doolittle Raid (18 April 1942)

After the ship left San Diego, we went up to San Francisco to the Alameda Naval Air Station and loaded 16 B-25s on board. Then Jimmy Doolittle and his crew came aboard.

We thought we were ferrying planes to Alaska. It never even dawned on us that we were going to go bomb Tokyo until we were 2 days out of San Francisco. CAPT Mark Mitscher was our skipper. He got on the loud speaker and told us that we were going to bomb Tokyo. Our morale really shot up.

When I had some time, I went topside to the flight deck and went through the airplanes. They had 5-gallon cans of high octane gasoline stacked up to the ceilings and tied down in the center passageways of those B-25s. You know, those planes flew 2,200 miles.

On the morning of April 18th, we were about 600 or 700 miles from Tokyo when we spotted two Japanese trawlers. I was below because we were at general quarters and my battle station was in the main sick bay. I was the x-ray technician on board the *Hornet* and I had to be with my x-ray machine. We knew the planes were getting ready to take off because they sounded general quarters early that morning after we had spotted those trawlers. We knew something was up, but they didn't advertise it or call out a blow by blow. They had two ships they had to go sink—those two trawlers. The cruiser *Nashville* [CL-43] went over and blew them out of the water with one salvo each. They thought our position had been radioed back to Japan by those trawlers. So Jimmy Doolittle and our skipper, Marc Mitscher, decided that the bombers had better take off and get on their way.

The last plane that took off on April 18th was the 16th plane, which was back on the fantail. The wind was blowing like crazy and a plane handler named Airman Wall got pushed or shoved into one of the propellers and it chopped his left arm off. They brought him down to the

operating room of the sick bay and called me in to take an x-ray of his shoulder, which I did after they got the bleeding stopped.

Loss of *Hornet* (26 October 1942)

We were at general quarters early that morning before the planes took off to bomb the Japanese fleet. We sent every plane we had off to hit the Japs, and we hit them about the same time they were hitting us. From what I gathered, there were 80 planes in the first wave, and they all hit us. Every time a bomb or torpedo would hit, it would bounce the ship up and down with a loud noise.

After about 30 minutes, they told us to leave the sick bay and go topside to help take care of the wounded. So I went up on deck. When I got there I saw Marines stacked up like cordwood and started taking care of them as fast as I could, smearing tannic acid jelly on their burns, which was a mistake. They told us later that we had dirty hands and infection got into the wounds, and we shouldn't have been doing that. We should have been using sterile techniques, but we were in a battle. That day we lost 147 killed and about 500 wounded.

We were listing pretty bad and were dead in the water. The cruiser *Northampton* (CL-26) was towing us when we had another attack so we had to cut loose from the tow. We never got another tow. We were 45 miles north of Guadalcanal at Santa Cruz.

We got the wounded transferred and then started having services for the dead. We'd get five of the dead prepared, tie a 5-inch shell casing between the legs, then tie him up in a sheet, Chaplain [Edward B.] Harp held services for them, and we slid them over the side on a board.

After we got 25 or 30 of them over the side, we had another high altitude attack. I think nine bombers came over. This happened as we were burying the men from the fantail. We had to cut loose and take cover.

We were listing about 35 degrees. All five fire rooms were flooded. The water was covered with black, tarry oil. We had stopped burying the dead and abandoned ship. I went down a line; I had never learned how to swim. When I was in boot camp, I got somebody to qualify for me.

Anyway, I climbed down the rope and into the water. I had a life jacket on. I was in the water about 2 hours before a destroyer, the USS *Anderson* (DD-411), picked me up. □

In Memoriam

RADM Horace D. "Red" Warden, MC, USN, Pearl Harbor survivor and former commanding officer of Naval Hospital San Diego, died on 12 February in San Diego. He was 91. Dr. Warden was born in Broadview, MT, on 27 May 1911 and attended Montana State University in Missoula, from which he graduated with honors in chemistry with a bachelor of arts degree in 1933. He then attended Rush Medical College of the University of Chicago. Following graduation in 1938, Dr. Warden was commissioned a lieutenant (j.g.) in the Navy Medical Corps.

Dr. Warden entered active duty in 1939 and served as ward medical officer at Naval Hospital, Puget Sound, Bremerton, WA, in 1940. He was then assigned similar duty at Naval Hospital Pearl Harbor, HI, until February 1941 when he became Division Medical Officer for Mine Division Two. He was aboard the destroyer USS *Breese* (DM-18), a unit of that Division when the Japanese attacked on 7 December. Detached a year later, he was a resident for surgical training at Naval Hospital San Diego during most of 1943, and in 1944 served as executive officer at the Naval Hospital Corps School, Farragut, ID.

In December of that year, Dr. Warden joined the staff of Commander Minecraft, Pacific, and, as Staff Medical Officer, participated in the Iwo Jima and Okinawa campaigns. On board the coastal mine layer, USS *Terror* (CM-5), he was seriously wounded when a kamikaze plowed into the ship's communication platform, and one of its bombs exploded.



The attack cost the vessel 171 casualties: 41 dead, 7 missing, and 123 wounded. Dr. Warden's serious wounds caused him to be hospitalized for nearly 2 years.

In June 1945 he was transferred to Naval Hospital Farragut, ID, as a patient, and after recovering sufficiently to assume duty, served as Executive Officer of that hospital. His next tour of duty was at Naval Hospital San Diego as officer in charge of the sick officers' quarters, with additional duty as Assistant Chief of Medicine and Medical Officer on Surgical Service. From August 1948 until January 1949, Dr. Warden was assigned to the Bureau of Medicine and Surgery in the Personnel Division with additional duty as Assistant to the General Inspector, Medical Department.

In January 1949 he joined the staff of the presidential yacht, USS *Williamsburg* (AGC-369) as medical officer. During the 4 years of that assignment he was also a member of the White House staff, traveling extensively with President Truman as Physician to the President and his staff. Concurrently, he had further addi-

tional duty as Professional Assistant to the Executive Officer of Naval Hospital Bethesda, and was on the surgical service of that facility.

From January 1945 until July 1955 he was again a resident, training in general surgery and thoracic surgery at Naval Hospital San Diego. He then reported to Naval Hospital Philadelphia, where he served as Chief of Surgery and later as Executive Officer and Chief, Thoracic Surgery.

In July 1962 he assumed command of Naval Hospital, Naval Base, Charleston, SC, and in December 1964 became Commanding Officer of Naval Hospital San Diego, and Commanding Officer of the Hospital Corps School, San Diego.

In 1959 Dr. Warden was one of seven military physicians selected by the Department of Defense to initiate a health monitoring program for the original Mercury 7 astronauts. He then became a medical adviser and coordinator of recovery teams for both the Mercury and Gemini programs. He participated in all astronaut flights as the general and thoracic surgery member of the medical specialty team stationed at Cape Canaveral for these flights, and was coordinator for all medical recovery teams stationed on fleet units.

Dr. Warden took part in "Project Breeches Buoy," the repatriation of the crew of USS *Pueblo* (AGER-2). The officers and men of the intelligence vessel had been held by the North Koreans for 11 months following its capture in 1968. For his contributions to that effort, he was awarded the Meritorious Service Medal for "... arranging and provid-

ing essential physical facilities for the reception and care of the repatriated crew. . .”

RADM Warden retired in 1972 following 33 years of active service. He was a diplomate of the American Board of Surgery, diplomate of the Board of Thoracic Surgery, a Fellow of the American College of Surgeons, a Fellow of the American College of

Chest Physicians, and a member of the Association of Military Surgeons of the United States, the American Medical Association, and the Philadelphia Academy of Surgery. He was also a member of Phi Chi (medical) and Sigma Alpha Epsilon (social), fraternal organizations.

He held the Bronze Star Medal with Combat V, the Meritorious Ser-

vice Medal, the Purple Heart, American Defense Service Medal with star, American Campaign Medal, Asiatic-Pacific Campaign Medal with four engagement stars, the World War II Victory Medal, and the National Defense Service Medal with bronze star. □



HMC Jerry L. Strickland, USN (Ret.), witness to the Doolittle raid on Japan, and survivor of the World War II sinking of USS *Hornet* (CV-8), died 28 January in Rocky Mount, NC. He was 81. Chief Strickland was born 4 June 1921 in Middlesex, NC, joined the Navy in 1939, and graduated from Hospital Corps school, Portsmouth, VA, in 1940. He was then transferred to Naval Hospital Newport, RI. He served there just a few months before being ordered to Naval Hospital Washington, DC, where he attended x-ray school.

Following graduation, he was assigned to Naval Hospital Philadelphia as an x-ray technician before being transferred to *Hornet*'s precommissioning crew. He sailed aboard when the carrier joined the Pacific Fleet in 1942, and ferried LTC

Jimmy Doolittle, his crew, and their 16 B-25 bombers for their heroic raid on Japan, 18 April 1942.

On 26 October 1942 young *Hornet* participated in her last battle—Santa Cruz Island. Following fatal damage inflicted by attacking Japanese aircraft, Strickland helped treat many of the severely wounded and burned victims, and helped evacuate the injured before he and his shipmates were ordered to abandon ship.

Following *Hornet*'s loss, Pharmacist's Mate Strickland re-

turned to the U.S. and was assigned to Naval Hospital Memphis, TN. After a year as the senior hospital corpsman in charge of the x-ray department, he was reassigned to the salvage tug USS *Chain* (ARS-20) and saw independent duty caring for the vessel's divers and crew in Brazilian waters.

He briefly left the Navy after the war, but then reenlisted, seeing further duty at Naval Station Sangley Point in the Philippines, Naval Hospital Portsmouth, VA, and Panama. He retired from his last duty station at Naval Hospital St. Albans, NY, in 1959 after 20 years of active duty. After the Navy, he worked for many years as an officer in the U.S. Public Health Service and for the U.S. Customs Service at Kennedy and Miami International Airports until his second retirement in 1978. □



RADM Charles L. Waite, MC, USN (Ret.), former Assistant Surgeon General of the Navy, died 19 March 2003 in Easton, MD, the day after his 80th birthday. Dr. Waite was born in Washington, DC, and attended the University of Maryland before entering Georgetown University, from which he received a BA in 1943. Commissioned an ensign in the Naval Reserve in February 1943, he continued study under the V-12 Program at Georgetown University School of Medicine. Upon receiving his MD degree in 1946, he was commissioned a lieutenant (j.g.) in the Naval Reserve.

Dr. Waite interned at the National Naval Medical Center (NNMC), Bethesda in 1946 before undergoing 3 months of instruction at the Naval School, Deep Sea Divers, Washington, DC. In the latter part of that year he also attended the line officer course in submarines at the Submarine School, Submarine Base, Groton, CT. In January 1948, he joined Submarine Squadron Three as Medical Officer. In April 1949 he reported for his residency at Children's Hospital, Washington, DC.

Between September 1950 and February 1952, Dr. Waite served as Medical Officer at the Naval School, Deep Sea Divers, Washington, DC. While in that assignment, he also had duty as Assistant Medical Officer for the

Expert Diving Unit and Medical Officer of the Underwater Demolition Team. Returning to NNMC Bethesda, he was assigned as Senior Resident (Pediatrics) until February 1953, when he joined Submarine Squadron One as Squadron Medical Officer. In that capacity, he also served as Acting Force Medical Officer, Submarine Force, Pacific Fleet; Senior Medical Officer at Naval Dispensary, Submarine Base, Pearl Harbor; and Submarine Escape Training Tank officer.

In August 1955, Dr. Waite became Assistant Chief of Pediatric Service at NNMC, and while there also served as Intern Advisor and Technical Advisor for Navy Medical Training Films. From July 1958 to July 1960 he was Chief of Dependent Service, Intern Advisor, and officer in charge of naval indoctrination courses. In July 1962 he joined the staff of Commander Submarine Force, Pacific Fleet as Force Medical Officer with additional duty as Senior Medical Officer at the Submarine Base, Pearl Harbor, and Submarine Escape Training Tank Medical Officer.

In June 1964 Dr. Waite was assigned as Commanding Officer of the Naval Submarine Medical Center, Submarine Base, Groton, CT. He also had additional duty from December 1964 to June 1965 as a high pressure inside instructor and observer, and as experimental test subject in high pressure chambers. "For meritorious service . . . (in that capacity) from July 1964 to August 1967 . . ." he was awarded the Navy Commendation Medal.

Dr. Waite transferred in August 1967 to Naval Hospital Portsmouth, VA, to serve as Executive Officer until July 1968, then assumed command of the Naval Medical School, NNMC, Bethesda. On 1 January 1971, Dr. Waite was promoted to rear admiral and in July of that year re-

ported as Fleet Surgeon on the staff of the Commander in Chief, Pacific Fleet, a post in which he served until October 1973.

RADM Waite reported to BUMED, Washington, DC, in October 1973 as Assistant Chief for Operational Medical Support. In June 1975, he became Deputy Surgeon General. He retired 1 July 1976 after 35 years naval service.

RADM Waite was a Fellow of the American Academy of Pediatrics, a Fellow of the American College of Physicians, and an Associate Fellow Aerospace Medicine. He was also a member of the American Medical Association, the Society of Military Surgeons, the Industrial Medical Association, the Space Medicine Branch of the Aerospace Medical Association, American Academy of Pediatrics, a charter member of the Committee on Military Pediatrics, American Academy of Pediatrics, the American College of Physicians, the Walter Reed Society, and the Undersea Medical Society. Dr. Waite also held positions as Assistant Clinical Professor of Pediatrics, Georgetown University, Clinical Instructor of Pediatrics at the University of Pennsylvania, and was a member (ex officio), Board of Regents, National Library of Medicine.

Dr. Waite held the Legion of Merit, the Meritorious Service Medal, the Navy Commendation Medal, the American Campaign Medal, the World War II Victory Medal, Navy Occupation Service Medal, Asia Clasp, China Service Medal, National Defense Service Medal with bronze star, Korean Service Medal, United Nations Service Medal, the Korean Presidential Unit Citation Badge, the Vietnam Service Medal, and the Vietnam Meritorious Unit Commendation (First Class with Palm). □

There have been legions of great men and women who have served in the U.S. Navy since the beginning. Even though many of these lives have been lost to the rivers of time, sometimes we have the good fortune to rediscover some of them. This is certainly the case with CAPT Frank Frates, DC, USN (Ret.) who died 31 October 2002 at age 93.

CAPT Frates was born in San Jose, CA, on 18 August 1910, but it has been said that his love of the sea began a few years later as a child in Hawaii. At age 16 he joined the Merchant Marine where he served as a cadet officer in a Shanghai shipping office. Of his time in the Merchant Marine, Frates later remarked, "I matured with the sea as my master during those years."

With a foundation of sea experience, he pursued his BS and DDS at the College of Physicians and Surgeons in San Francisco (1933), and an MS at Northwestern University (1934). Upon graduation he served as an instructor at the College of Physicians before joining the Navy in 1936. He was one of only 12 officers selected in a nationwide examination of 1,200 candidates. As Frates once related, "The exam consisted of a 3-day physical along with written tests in all the sciences and practical exams in gold foil and amalgam restorations. In addition, there was an oral exam on world affairs. I was one of the 12 dentists who received commissions at the completion of these examinations."

Frates's naval career carried him to the Pacific at a most precarious time. In 1941 he was serving as a dental officer aboard the repair ship USS *Vestal* (AR-4), which was moored at Pearl Harbor, adjacent to another ship but separated by two "camels"—6-foot-wide wooden rafts that kept the hulls from colliding with each other.



Dr. Frates teaching a class of dental technicians.

The other ship was USS *Arizona* (BB-39). It was 7 December 1941. Frates once recounted, "Early in the morning, general quarters were sounded. 'This is not a drill. I repeat, this is not a drill. We are under attack,' the speakers blared. The message was broadcast from every ship and the harbormaster's tower. Amazingly, there was no chaos or confusion, just shouts exhorting each other to get those [expletive]."

Dr. Frates survived this experience with the moniker of "Fearless Frank," and a commendation from the Chief of the Bureau of Medicine and Surgery for outstanding service as a dental officer during and subsequent to the enemy attack. He had filled in for the absent medical officer, providing treatment to many wounded even though he himself was wounded.

Dr. Frates had many talents and almost as many names. If he was "Fearless Frank" to some, he was also "The Coach" to many because of his love for sports. While serving with the Marines in Tientsin, China, he acted as a sports announcer for the Marine Corps baseball and basketball games. He excelled in recreational sports and founded intramural leagues and athletic clubs. While serving as the Director of Enlisted and Intern Training at the Naval Dental School in Bethesda, MD, from 1946-1952, he also acted as the athletic officer, sports columnist for the *Journal*, and helped establish a Navy golf course and champion basketball team. On occa-

sion he was called to officiate at the All-Navy basketball championships in Honolulu.

Friends of Dr. Frates remember him as a very outgoing man. While at Bethesda, he thought nothing of inviting Wimbledon and U.S. Open tennis champ Pauline Betz-Addie to play a series of exhibition matches on the National Naval Medical Center courts. His additional duties, of which there were many, included serving as a command docent conducting tours for visiting delegations and dignitaries.

Dr. Frates' extroverted behavior went hand in hand with teaching, which he took great joy in. He taught dental technician classes at the Naval Dental School and served as the editor for the *U.S. Navy Handbook for Dental Technicians, Maintenance and Repair*, the *Handbook of Dental Technicians*, and numerous Navy study guides.

After retiring from the Navy in 1957, he served as the Associate Professor and Director of the Department of Operative Dentistry, Seton Hall College of Medicine and Dentistry, Jersey City, NJ. Later he became a Professor and Director of the Department of Restorative Dentistry and Director of Clinics at the New Jersey Dental School. In later years, he served as a consultant in restorative dentistry at the VA Hospital, South Orange, NJ, until his retirement in 1970.

CAPT Frates was a member of the American Dental Association, New Jersey State Dental Association, Fellow of the American College of Dentists, and Fellow of the International College of Dentists. He was also an honorary member of the Faculties of Peiping Union Medical College, Peiping (Beijing), China, and the University of Buenos Aires, Argentina. □



Photo courtesy of Mary Ann Baxter

LTJG Bernatitus aboard USS *Relief* on its way to Okinawa. The coveralls were made for the nurses at Hospital No. 1 in Little Baguio, Bataan.

CAPT Ann A. Bernatitus, NC, USN (Ret.), survivor of Bataan and Corregidor, died in Wilkes-Barre, PA, on 3 March. She was 91. Bernatitus was born on 21 January 1912 in Exeter, PA, and trained at the Wyoming Valley Homeopathic Hospital in Wilkes-Barre, PA. Following graduation in 1931, she took a post-graduate course in operating room technique and management at the University of Pennsylvania Graduate Hospital, Philadelphia, graduating 3 years later. She

then took a job as a staff nurse in New Rochelle Hospital in New York before returning to Pennsylvania as a staff nurse at the Nanticoke State Hospital.

In 1936 she joined the Navy Nurse Corps and was assigned to Naval Hospital Chelsea, MA. In a 1994 interview, Bernatitus recalled the status of Navy nurses in the interwar period. "In those days we were neither fish nor fowl. We were not officers and we were not enlisted. Every morning we went on duty and had to count all

the blankets and thermometers. I think we had to count the glasses. Then we scrubbed the floors and had to keep the curtains at the windows just so."

In 1938 she reported to Naval Hospital Annapolis, MD. By then, a Navy nurse's living conditions had noticeably improved. "The nurses lived separately; they had their own mess. You were served; the food was always good. Life was good." Two years later, nurse Bernatitus received orders to Naval Hospital Cañacao, the Philippines. "I had no idea what the Philippines looked like. I remember the smell of copra which seemed to be everywhere and the nipa huts, and the kids running around naked, the houses on stilts, the carabao."

Like other staff at Naval Hospital Cañacao, tropical duty meant short work days and plenty of opportunities to shop and sightsee in downtown Manila. But that was before Pearl Harbor. Just hours after the surprise attack in Hawaii, Japanese bombers hit the Philippines. On 10 December 1941 the bombers returned and virtually destroyed the Cavite Navy Yard. Suddenly Bernatitus and her 11 fellow nurses had plenty of work to do caring for hundreds of casualties.

After evacuating many of them to Sternberg Army Hospital in Manila, the nurses were divided into teams to staff remote locations in and around the city.

Under cloudy circumstances compelled by the fog of war, Bernatitus ended up with a surgical team that moved in convoy down the Bataan Peninsula, dodging Japanese aircraft all the way. At Camp Limay in what was designated Hospital Number 1, she and her comrades cared for the increasing influx of casualties.

On 23 January 1942 the hospital moved further down the peninsula to

Little Baguio. On 30 March the hospital there was bombed. "The alarm sounded and then we could hear the bombs coming down with a whistling sound." A few days later, the Japanese struck again, this time scoring a direct hit on one of the wards. "There were patients who were tied in traction. The nurses had to cut the ropes so they could fall to the deck. When the Japanese left, there were pajamas in the treetops!"

As the situation on Bataan deteriorated, Bernatitus made it over to the island of Corregidor in Manila Bay. In one of the hospital laterals of the Malinta Tunnel, she tended patients even as the Japanese bombardment made life above and below ground unbearable. Just days before GEN Jonathan Wainwright surrendered "The Rock," Bernatitus was selected along with six Army officers, eleven Army nurses, and one civilian woman to be evacuated by submarine. "My name was called and I stepped out of the crowd because everybody had gathered around to see this. Wainwright shook everyone's hand, wished us Godspeed, and said, 'Tell them how it is out here.' They then took us out of the tunnel down to the dock. We got on a boat that was even smaller than the one that took us over to Corregidor. Finally we saw a dark shape and came alongside. You could hear the slapping of the water between the two objects."

Bernatitus and the others escaped to Australia aboard USS *Spearfish* (SS-190). She arrived back home in time to be present when President Roosevelt dedicated the new Naval Medical Center at Bethesda, MD, on 31 August 1942.

While stationed at Bethesda, she received additional duty promoting war bonds in a series of speaking

tours. On one of those tours to New Orleans, she was presented with the Legion of Merit, becoming the first woman to receive that honor.

Following her Bethesda tour, nurse Bernatitus was assigned to Naval Hospital Great Lakes as assistant chief nurse. In November 1944 she received orders to the hospital ship USS *Relief* (AH-1) as chief nurse. She and her ship arrived in Okinawa on 1 April 1945, the day the long, bloody battle for that island commenced.

Following V-J Day, Bernatitus was assigned to Naval Hospital Brooklyn before attending the Philadelphia School of Occupational Therapy. She was then assigned to Naval Hospitals Houston, TX, Long Beach, CA, Camp Pendleton, CA, and Newport, RI. She retired as a captain in 1959.

Following her Navy career, CAPT Bernatitus worked in medical equipment sales, and then as a volunteer at the Little Flower Manor retirement home in Wilkes-Barre.

During her interview held in the Exeter home she had been born in, I recall discussing the part GEN Douglas MacArthur had played in the siege of Corregidor and his subsequent successes during the war. "He was quite a legend," I said, pointing out the obvious.

CAPT Bernatitus, the only Navy nurse stationed in the Philippines to evade capture by the Japanese, looked me square in the eye and retorted, "Well, so am I, young man!" I saw no reason to argue the point.—JKH



LTJG Bernatitus receives the Legion of Merit following her return from the Philippines.

BUMED Archives

Book Review

When Every Moment Counts: What You Need to Know About Bioterrorism from the Senate's Only Doctor by Senator Bill Frist, M.D. Rowman and Littlefield Publishers, Lanham, MD. 181 pages, 2002

With the anthrax letter scare following on the heels of the 11 September attacks, the public has become sensitized to the dangers of biological terrorism. Navy medicine can expect more questions relating to anthrax, botulism, and tularemia from patients at home, as well as deployed Sailors and Marines. Some perceptions about their lethality are wrong, and dispelling myths is half the battle for healthcare providers.

Senator Bill Frist, the only physician serving in the U.S. Senate, found himself on the front lines when two anthrax-laced letters were delivered to his colleagues, Senators Tom Daschle and Patrick Leahy. The incident generated mass panic and paralyzed the U.S. Capitol for some time. Dr. Frist at once took charge of managing the crisis and then formulated ways to deal with this frightening form of bioterrorism. *When Every Moment Counts* is a product of that experience.

Dr. Frist explains how being exposed to anthrax is a far cry from testing positive for the disease. Not everyone exposed requires antibiotics. Readers get a sense of those initial questions which bombarded health officials during the Capitol crisis. Am I safe? Is this harmful? Can I carry the spores on my clothing and infect my loved ones at home? How about preg-

nant women being exposed or taking antibiotics? How do I tell the difference between anthrax and the flu? Is it skin or inhalation anthrax?

Frist first developed a website to answer these questions and then went on to formulate a plan congressional employees could follow on a day-by-day basis. You can access this website at <http://frist.senate.gov>.

Frist lays out the eight most likely biological agents a terrorists might use. He describes anthrax, smallpox, and viral hemorrhagic fevers, among others, and assesses each biological agent's availability, its stability as a weapon, and its lethality. One chapter highlights ways in which parents can talk to children about disease. Frist also points out the danger of dosing up on antibiotics at home and the problems posed by increasingly resistant infections.

The author does a marvelous job in addressing the everyday concerns regarding biological terrorism. It is highly recommended for all medical personnel, particularly those forward deployed to areas where biological weapons pose a serious threat, and for those involved in disaster preparedness at our military treatment facilities. □

—LCDR Aboul-Enein is a Medical Intelligence Officer currently assigned as Middle East Country Director at the Office of the Secretary of Defense.

Navy Medicine 1961



BUMED Archives

Red Cross volunteer, Elizabeth Aydlett, conducts bedside craft class at Naval Hospital, Portsmouth, VA.

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